

REMARKS

Favorable consideration of this application is respectfully requested.

Claims 1-15, 17, and 19-24 are currently active in this case. Claims 7, 13, and 17 have been amended, Claims 22 and 23 have been added, and Claims 15 and 16 have been cancelled by way of the present amendment. Each new and amended Claim is supported by the specification and claims as originally submitted and no new matter has been added.

In the outstanding Official Action Claim 8 was rejected under 35 U.S.C. §102(e) over *Kadambi et al.* (U.S. Patent Application No. 2002/0186705, hereinafter *Kadambi*), Claims 1-3 and 6-7 were rejected under 35 U.S.C. §103(a) over *Dietz et al.* (U.S. Patent Application No. 2004/0083299, hereinafter *Dietz*), Claims 4-5 were rejected under 35 U.S.C. §103(a) over *Dietz* in view of *Dillon et al.* (U.S. Patent No. 6,430,233, hereinafter *Dillon*), Claims 9, 15 and 16 were rejected under 35 U.S.C. §103(a) over *Kadambi* in view of *Joubert et al.* (U.S. Patent No. 6,101,616, hereinafter *Joubert*), Claims 10-13 were rejected under 35 U.S.C. §103(a) over *Kadambi* in view of *Joubert* and further in view of *Yang et al.* (U.S. Patent No. 6,424,650, hereinafter *Yang*), Claim 14 was rejected under 35 U.S.C. §103(a) over *Kadambi* in view of *Joubert* and further in view of *Yang and still further in view of Choe* (U.S. Patent Application No. 2002/0118682), Claim 17 was rejected under 35 U.S.C. §103(a) over *Dietz* in view of *Joubert* and further in view of *Yang*, Claims 18-20 were rejected under 35 U.S.C. §103(a) over *Kadambi* in view of *Tanaka* (U.S. Patent No. 5,867,509), and Claim 21 was rejected under 35 U.S.C. §103(a) over *Kadambi* in view of *Tanaka* and further in view of *Joubert*,.

Applicants respectfully traverse the rejection of Claim 7 as being obvious over *Kadambi* in view of *Joubert*. As amended, Claim 7 recites:

7. (Currently Amended) A ~~The~~ packet accelerator according to Claim 6 device, comprising:

a packet header parser configured to parse packet header fields from incoming packets directed toward a host;

a processing mechanism configured to perform packet re-assembly on packets determined to have valid connections with said host; and

an address filter configured to identify data parsed from said packet header fields needed for packet re-assembly and place that data in a local memory directly accessible by said processing mechanism;

wherein:

said address filter comprises,

a hashing mechanism configured to determine an index based on at least part of the parsed header fields,

a connection table containing connection information indexed by said hashing mechanism, and

a forward engine configured to,

retrieve connection table values from said connection table corresponding to the incoming packets and compare the retrieved connection table values with the incoming,

discard incoming packets that do not have matching connection information in said connection table,

forward the incoming packets to the processing mechanism for re-assembly if the incoming packets have matching connection information in said connection table, and

retrieve additional connection table values from said connection table when more than one connection has been stored by reference to said index; and

said connection table comprises a set of first connection address data, each first connection address data is stored at a hashed index location and includes a pointer that is either null, indicating the first connection address data is the only connection address saved at its corresponding hashed index location, or pointing to a next connection hashed address data indicating a next connection address saved at a same hashed index.

However, the cited references fail to teach or suggest similar subject matter.

Applicants respectfully traverse the assertion in the outstanding Office Action which states that *Dietz*, at paragraph 0100, teach "... *each first connection address is stored at a hashed index location and includes a pointer that is either null, indicating the first connection address data is the only connection address saved at its corresponding hashed index location, or pointing to a next connection address data indicating a next connection address saved at the same hashed index.*"

Applicants admit that *Dietz* teach the use of hashing for saving selected portions of the packet. However, the hashing described in *Dietz*, and particularly at page 8, paragraph 0100, is related to processing of the packet (e.g., storing values needed for further packet processing in hashed locations). In contrast, the hashed index location of Claim 7 is related to storage of valid connections. Further, Claim 7's hashed index is an index to both a valid connection and a pointer that is either null or points to a next valid connection. Therefore, the present invention hashed location is an index to a connection and a list of possible additional connections valid for the same hash index. And, Applicants respectfully submit that *Dietz* fails to teach or suggest a pointer (at a hashed index location) that identifies a valid connection and a pointer that is either null or points to a next valid connection. Accordingly, Applicants respectfully submit that Claim 7 is patentable over *Dietz* and *Dillon*.

Applicants respectfully traverse the rejection of Claim 13 as being obvious over *Kadambi* in view of *Joubert*. As amended, Claim 13 recites:

13. (Currently Amended) A The method of accelerating packet re-assembly according to Claim 10, further comprising the steps of:

parsing a header fields of an incoming packet to determine data needed for packet re-assembly;

forwarding the packet to be re-assembled to a re-assembly mechanism;

placing the data needed for packet re-assembly in a local memory directly accessible by said re-assembly device; and

identifying if the incoming packet is part of an established connection with said host;

wherein:

said step of determining if the incoming packet is part of an established connection comprises the steps of:

hashing at least part of the parsed header fields to determine an index into a connection table;

retrieving connection information from the connection table based on said index;

comparing the connection information retrieved from the connection table to connection information from the parsed header fields;

if the connection information from the connection table matches the connection information from the parsed header fields, then, identifying the incoming packet as being part of an established connection with said host; and

if the connection information from the connection table does not match the connection information from the parsed header, then,

determining if any additional connection addresses are hashed into the connection table at said index, and

if additional connection address are hashed into the connection table at said index, then,

retrieving the additional connection addresses,

comparing the additional connection addresses to the connection information from the parsed header fields, and

if any of the additional connection addresses match the parsed header fields, identifying the incoming packet as being part of an established connection with said host.

However, the cited references fail to teach or suggest similar subject matter.

As admitted in the outstanding office action, *Kadambi* fails to teach “... ***wherein the connection information from the connection table does not match the connection information from the parsed header, then, determining if any additional***

connection addresses are hashed in the connection table at said index, and if additional connection addresses are hashed into the connection table at said index, then, retrieving the additional connection addresses, comparing the additional connection addresses to the connection information from the parsed header fields, and if any of the additional connection addresses match the parsed header fields, identifying the incoming packet as being part of an established connection with said host." And, Applicants respectfully submit that *Joubert* fails to teach or suggest the same.

Applicants respectfully traverse the assertion that *Joubert*, at col. 9, lines 55-58, teach or suggest the above quoted claim language. In particular, Applicants respectfully note that *Joubert*, at col. 9, discusses mainly that received packets are discarded if not belonging to dedicated connections of the host (col. 9, lines 4-6, lines 16-17). Moreover, *Joubert's* discussion at col.9, lines 55-58 are specifically directed to the sending of a connection re-initialization packet upon receipt of a packet not linked to an established connection (which, in *Joubert*, is an error). In contrast, Applicant's claimed invention, upon receipt of connection information not matching the connection table, performs additional searching of additional connection addresses hashed at the same index of the non-matching connection information ("retrieving the additional connection addresses, and comparing the additional connection addresses to the parsed header fields."). However, as highlighted by the directly preceding discussion, *Joubert* fails to teach or suggest similar subject matter. Accordingly, Applicants respectfully submit that Claim 13 is patentable over the cited references because the combined references fail to teach or suggest subject matter specifically claimed in Claim 13.

Applicants respectfully submit that pending independent Claims 1, 8, 17, and 18, when viewed in the context of the present invention are also patentable over the cited references. Reconsideration is respectfully requested.

Based on the patentability of the independent Claims, Applicants respectfully submit that the dependent Claims are also patentable.

Consequently, no further issues are believed to be outstanding, and it is respectfully submitted that this case is in condition for allowance. An early and favorable action is respectfully requested.

Respectfully submitted,
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